

25050



SOUTH AUSTRALIA

ANNUAL REPORT

OF THE

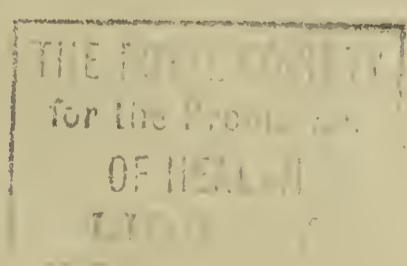
Department of Public Health

AND THE

Central Board of Health

FOR THE

Year ended 31st December, 1960



BY AUTHORITY: W. L. HAWES, Government Printer, Adelaide

1962

A

RBB/63W

WELLCOME INSTITUTE
LIBRARY

Co	WELLCOME
Co#	+
No.	Ann Rep WAZER
	• HAB
	£ 7/-
	11/20



22501401284

THE PUBLIC HEALTH

Annual Report of the Department of Public Health and the Central Board of Health to the Minister of Health (Hon. Sir Alexander Lyell McEwin, K.B.E., M.L.C.)

SIR—We have the honour to submit the report for the Department of Public Health and the Central Board of Health for the year ended 31st December, 1960. The report is divided into the following sections :—

1. Staff and administration.
2. Public Health Supervision.
3. School Health Branch.
4. Poliomyelitis Branch.
5. Tuberculosis Branch.
6. Summary and comments.

Sections 2, 3, 4 and 5 deal with branches of the Department and have been prepared by the officers in charge, namely, the Principal Medical Officer (Public Health), the Principal Medical Officer for Schools, the Principal Medical Officer (Poliomyelitis) and the Director of Tuberculosis.

I. STAFF AND ADMINISTRATION.

Personnel of the Board.—During the year the members of the Board were :—

Chairman—Phillip Scott Woodruff, M.D., B.S., D.T.M. & H., M.R.A.C.P.

Members appointed by the Governor—

John Burton Cleland, C.B.E., M.D.Ch.M., F.R.A.C.P.

George Hugh McQueen, M.B., B.S., D.P.H., D.T.M., F.R.S.H., F.R.S.T.M. & H.

Member elected by the metropolitan local boards—

Arthur Roy Burnell, J.P., F.A.S.A.

Member elected by other local boards—

Alfred Bertrani Cox, J.P., F.A.S.A., F.C.I.S.

Secretary—Murray Edwin Stephens Bray.

It is reported with regret that the death of Mr. A. R. Burnell occurred on 27th October, 1960 whilst he was on leave in Japan. The Board wishes to place on record appreciation of the many years of time and effort given by Mr. Burnell in the interests of the public health of the State and in the cause of his fellow man.

Staff of the Department.—As at 31st December, 1960 the principal staff consisted of the Director General of Public Health (Dr. P. S. Woodruff), the Principal Medical Officer (Public Health) (Dr. G. H. McQueen), the Principal Medical Officer for Schools (Dr. Marjorie P. Casley Smith), the Principal Medical Officer (Poliomyelitis) (Dr. R. R. Horton), the Director of Tuberculosis (Dr. T. G. Paxton) and the Secretary (Mr. M. E. S. Bray). Throughout the year there was an average of 171 officers and employees.

From the 2nd February to early in November the Principal Medical Officer for Schools, Dr. M. P. Casley Smith, was on long service leave and her office was temporarily filled in this period by Dr. Patricia Sprod. Dr. Sprod proved to be well fitted for this additional responsibility, and her efforts in keeping the School Health Services operating smoothly during this busy period of the year were appreciated by the Department.

“*Good Health.*”—During the year four booklets were printed and distributed to local boards, medical officers and other interested parties. Some of the subjects in these issues were :—

1. The 50th birthday of the Mothers and Babies Health Association, deaf children, pesticides, venomous jellyfish, road accidents and immunization.
2. Health problems and safety in industry, medical contribution to industrial safety, alcohol and road accidents, benzol poisoning, atom splitting and your health and vectors of disease in South Australia.
3. Clean air, the fight against old age, food inspection, progress in poliomyelitis, amending legislation and qualifications of Health Inspectors.
4. The 21st Anniversary of the acceptance by Sir A. Lyell McEwin, K.B.E., M.L.C. of the portfolio of Health, tuberculosis loosens its grip, harmful substances in home, getting sick and getting well, care with coconut, better health and asthmatic children.

The National Health and Medical Research Council and Committees.—The Department was represented at the Council and Committee meetings during the year. Dr. P. S. Woodruff attended council meetings at the 49th and 50th sessions held in Canberra in May and October, 1960.

FORTY NINTH SESSION.—The following resolutions were adopted by the Council :—

1. *Medical Research in Australia.*—That the scope and future policy of medical research in Australia should be examined by an expert Committee consisting of Australian representatives nominated by the Medical Research Advisory Committee and that the assistance of one or two overseas experts to be enlisted to enable impartial opinion to be put forward during the Committee's deliberations. This committee to comprise of representation from—

Australian National University,
Commonwealth Department of Health,
Research Institutes,
Universities,
Clinical medicine,

with power to make other recommendations.

2. *Vitamins.*—That the addition of synthetic vitamins to food be controlled by a general prohibition to which specific exceptions may be made by regulation.

3. *Broadcasting and Television—Patent Medicine Advertisements.*—That section 100 (6) of the Broadcasting and Television Act be amended by substituting the following—

(1) A licensee shall not broadcast or televise an advertisement relating to—

- (i) a substance or appliance for which a therapeutic use is claimed, or
- (ii) a substance, appliance, method or technique for which cosmetic, physiological or anatomical advantages are claimed,

unless the text of the proposed advertisement has been approved by the Director-General of Health, or, on appeal to the Minister under this section, by the Minister

4. *Maximum Concentrations of Atmospheric Contaminants for Industrial Exposures.*—That the schedule of recommended maximum concentrations of atmospheric contaminants for Occupational Exposures, as recommended by the Occupational Health Committee in March, 1960, should be published as the Australian standards on this subject.

5. That the Australian Atomic Energy Commission be invited to submit to the Chairman of the Council for its evaluation, proposals it has, from time to time, for the productions of radio isotopes in the form of grains, wires, rods, discs regular and irregular shapes for radio-therapeutic purposes within Australia.

6. *Deaths Reported to Coroners.*

(a) that the certificate which the coroner is required to complete for purposes of registering the death should contain provisions for reporting the cause of death in the form prescribed in the international medical certificate of cause of death. Guidance as to the sequence of causes of death from the medical viewpoint can be obtained from the medical practitioner conducting the post-mortem or, if no post mortem was required, from the medical practitioner(s) advising the coroner as to the cause of death from the medical viewpoint.

(b) that it would be of considerable assistance, in the interests of accuracy, clarity and uniformity, if a schedule of notes was prepared for the guidance of coroners.

7. *Medical Certificate of Cause of Death.*—So that the essential difference in the information sought of the certifier in the two parts of the Medical Certificate may be visually accentuated, and in order to avoid the use of Part II (other significant condition contributing to the death, but not related to the disease or condition causing it) as a space to insert "spill over" information from Part I, it is recommended that—

(1) Two lines be provided for the insertion of the cause in (c) of Part I.

(2) A heavy line be drawn between Parts I and II.

(3) The heading—"Other significant conditions contributing to the death but not related to the disease or condition causing it" be printed across the certificate, under the heavy line and above the line on which the conditions are entered.

8. *Carcinoma of the Lung.*—That the Council expresses itself as strongly of the opinion that, cigarette smoking being a contributory cause in the development of lung cancer, Commonwealth and State Departments of Health, Local Health Authorities and Educational Institutions should devote special attention to a campaign to publicize the risks to health attaching to tobacco smoking. The Council also considers that cigarette and tobacco advertisements on television and radio and in the press should be subject to strict control to prevent the fostering of smoking by young people.

FIFTIETH SESSION.—The following resolutions were adopted by the Council :—

1. *Malaria.*—That in States where malaria is notifiable the opportunity of notification should be taken to ensure that the patient receives treatment to eradicate infection.

2. *Infected Coconut.*—

(1) That in view of the finding of salmonella organisms in a number of samples of desiccated coconut, further importations of this commodity should be prohibited, unless satisfactory evidence is produced that it is manufactured under suitable hygienic conditions and is free from harmful organisms.

(2) That the Commonwealth Department of Health investigate the practical value of ethylene oxide or similar gas for the sterilization of dessicated coconut, at ports of entry into Australia.

3. *Advertising of Proprietary Medicines.*—The Council reaffirmed its resolution of the forty-ninth session that section 100 (6) of the Broadcasting Act be amended, but deleted the word "anatomical" in (ii) of the proposed amendment.

"A licensee shall not broadcast or televise an advertisement relating to—

(i) a substance or appliance for which a therapeutic use is claimed, or

(ii) a substance, appliance, method or technique for which cosmetic and/or physiological advantages are claimed,

unless the proposed text of the advertisement has been approved by the Director-General of Health, or, on appeal to the Minister under this section, by the Minister."

4. *Venereal Diseases—Gonorrhoea.*—

(1) That the necessity of taking specimens for laboratory examination prior to the commencement of treatment be emphasized to the medical profession and the medical student.

(2) That standard procedure for diagnosis of gonorrhoea in the female should include—

(a) the examination of smears from vagina, urethra and rectum,

(b) culture of materials from these sites

and that State authorities should ensure that adequate facilities for bacteriological diagnosis including culture are readily accessible.

5. *Non-specific Urethritis.*—That the National Health and Medical Research Council extends financial support to intensive research into the causes of infective non-specific Urethritis.6. *Notification.*—That all States adopt and use the form of notification in current use in Queensland with substitution of the words "present condition" for the words "same complaint" in question nine.7. *Treatment.*—That laboratories in all States should undertake tests to ascertain the sensitivity of strains of gonococcus to penicillin and medical practitioners should be asked to report promptly all cases failing to respond to standard penicillin therapy.8. *Tracing of Infective Source.*—That in the State Venereal Diseases Acts, the penalty for discontinuing treatment before discharge should be raised to £100 or imprisonment for six months.9. *Diagnosis for Syphilis.*—That the standard of diagnosis for early syphilis should demand—

(a) careful clinical examination of the lesion,

(b) dark ground examination of a smear from the lesion,

(c) serological examination comprising a complement fixation test and any other, e.g., flocculation.

10. *Quadruple Antigen.*—

(a) That the Commonwealth Serum Laboratories should make Quadruple Vaccine available as from 1st February, 1961, in quantities sufficient to meet the requirements of infant immunization.

(b) The dosage required for the five doses should be determined by the Epidemiology Committee in collaboration with the Australian Paediatric Association.

(c) Quadruple vaccine will be distributed by the same method and under the same conditions as apply to poliomyelitis vaccine.

(d) The Council notes that the introduction of Quadruple antigen will entail considerable change in the current methods of immunizing infants. The Council emphasizes that it will be necessary for the medical profession to be thoroughly informed upon the proposed methods of distribution and the techniques of immunization and the reasons for them and considers that special measures should be taken to obtain the active co-operation of the profession in achieving a satisfactory level of protection.

(e) In order to prevent tetanus and to minimize the risks attaching to the use of anti-tetanic serum, the Council advocates the active extension of tetanus immunization. For this purpose the Council recommends that States should use the opportunity afforded by the medical profession's co-operation in the administration of Quadruple vaccine to enlist its assistance in publicizing the value and extending the use of tetanus toxoid and poliomyelitis vaccine in the older age groups.

11. *Medical Record of Birth.*—

(i) That in those States where there are statutory deficiencies, the Registrar-General should be given statutory power to require any prescribed information on births and deaths, including information which is not required for the purposes of registration and which need not be recorded in the birth and death registers.

- (ii) That the definition of still-born child and requirements relative to the registration thereof be deleted from appropriate Acts.
- (iii) That birth be defined as follows in Birth, Deaths and Marriage Acts :—

“Birth” and “Birth of a child” means, for the purposes of registration and reporting of particulars, the expulsion or extraction from its mother of a foetus of twenty weeks gestation or over.
- (iv) That the period within which a birth is required to be registered be reduced from 60 days to 30 days.
- (v) That medical practitioners be required to furnish a report of every birth as in (iii) above where the foetus is born dead, or the child does not survive 28 days.
- (vi) That key definitions of twenty weeks gestation and the determination of a live birth be referred to the Medical Statistics Committee and the Committee of the College of Obstetricians and Gynaecologists.
- (vii) That the Medical Statistics Committee with suitable co-opted members compile the details of the report required from medical practitioners as in (v) and all States adopt this report.

12. *Medical Research in Australia.*—

- (1) That a full-time Executive Officer be appointed. The Executive Officer should be a person of high academic qualifications and experience in medical research.
- (2) The status of the Executive Officer should be such that he will have access through the Chairman of the Council to the responsible Minister on matters concerned with medical research.

13. *Ante Partum Haemorrhage.*—That with the adoption of the twentieth week of gestation as the point after which a medical record of birth will be required, *Ante Partum Haemorrhage* shall be defined as follows :—

“Haemorrhage occurring after the twentieth week of gestation, from the first day of the last menstrual period.”

Two Occupational Health Committee meetings were held during the year. One was attended by Dr. G. H. McQueen (Principal Medical Officer, Public Health) and the other by Dr. C. O. Fuller. Mr. R. McCarthy (Pharmaceutical Inspector) attended the meetings of the two sub-committees dealing with Food Standards and Poison Schedules.

2. PUBLIC HEALTH BRANCH

The report of this Branch is divided as follows :—

- (a) Staff.
- (b) Vital Statistics.
- (c) Legislation.
- (d) Control of Infectious Diseases.
- (e) Control of Venereal Diseases.
- (f) Supervision of Environmental Sanitation.
- (g) Report of District Medical Officer for the Northern and Western Districts.
- (h) Report of the District Medical Officer for the South Eastern and Upper Murray District.
- (i) Supervision of Food and Drugs Sold in South Australia.
- (k) Supervision of Industrial Health.
- (l) Health Education.

(a) STAFF

The professional and sub-professional staff of the Public Health Supervision Branch of the Department of Public Health at the end of 1960 consisted of :—

- One Principal Medical Officer.
- Two District Medical Officers.
- Two Part-time District Medical Officers.
- One Chief Inspector.
- Ten Inspectors.
- One Nurse Inspector.
- Fifteen Part-time Inspectors.
- Two Pharmaceutical Inspectors.
- One Biophysicist.

The vacant position for a third District Medical Officer caused by the resignation of Dr. M. Zeville in 1959 was not filled during 1960.

During the year a new position was created for a health inspector under the Health Act and the Food and Drugs Act, whose main work would be the supervision of wine and spirit standards as laid down by the Food and Drugs Regulations. Mr. I. W. W. Darby, a health inspector of the Department of Public Health was appointed to this position. His work also includes the supervision of general sanitation and food supplies in hotels and places licensed to sell alcoholic drinks.

Mr. M. Yard was appointed from outside the service to be a health inspector under the Health Act and the Food and Drugs Act to fill the vacancy caused by Mr. Darby's transfer.

Towards the end of the year, Mr. Rohlfing was appointed to fill a newly created position of Pharmaceutical Inspector in the Department.

(b) VITAL STATISTICS

The following particulars for 1960 have been obtained from the Deputy Commonwealth Statistician. Some figures are subject to slight revision. Details for 1959 are shown in parentheses.

Population.—The estimated mean population for the State in 1960 was 944,785 (921,042).

Births.—The number of births registered during 1960 totalled 20,966 (20,372).

A period of 42 days after birth is permitted for registration; the number of births registered in a year therefore, usually differs from the number of births actually occurring during that year. In 1960 the number of births which occurred is estimated to be 21,100 (20,807).

Sexes of Births.—The masculinity ratio, i.e. the ratio of male births to female births, does not as a rule vary greatly from year to year. The 1960 figure of 105.43, however, was rather higher than the 1959 figure of 102.77, which was unusually low, being the lowest recorded since 1936 when the ratio was 102.43.

Still Births.—These numbered 280 (281). They are not included in births or deaths figures.

Deaths Registered.—A total of 7,804 (7,943) deaths were registered during 1960. This is the second highest number on record, the highest being 7,943 registered during the previous year. The death rate continued the downward trend which began in 1956 and reached a new record low of 8.26, the previous lowest rate being 8.44 in 1933.

Infantile Mortality.—Infant deaths registered during 1960 totalled 397 (422). The resultant infant mortality rate of 18.94 (20.71) was the lowest rate so far recorded, the previous lowest being 19.88 in 1956.

There were 278 (286) deaths of children under one month, and 119 (136) deaths of children from one month to one year. The main causes are shown in the following Table No. 1.

TABLE 1.—INFANT DEATHS: MAIN CAUSES SOUTH AUSTRALIA, 1956-60

Cause	1956	1957	1958	1959	1960
	No.	No.	No.	No.	No.
Diarrhoea	5	15	35	7	8
Congenital Malformations	71	92	85	72	95
Prematurity	99	76	74	69	82
Injury at birth	32	51	50	42	39
Post-natal Asphyxia and Atelectasis	34	51	42	58	28
Other diseases peculiar to early infancy	43	31	41	49	43
Cerebro-spinal Meningitis	—	1	—	1	1
Meningitis	5	8	5	6	5
Whooping Cough	2	—	1	—	1
Pneumonia	35	38	48	44	23
Hernia and Intestinal obstruction	2	4	3	2	6
External causes	7	9	18	19	12
All other causes	42	27	47	53	54
Total	377	403	449	422	397

Marriages.—The number of marriages registered during 1960 was 6,607 (6,614). The rate per 1,000 of the mean population was 6.99 (7.18).

The mean age of marriage for bachelors was 25.9 (26.2) years and for spinsters 22.5 (22.8) years.

Summary.—The following Table No. 2 shows the numbers and rates per 1,000 of the mean population of registered births, deaths and marriages; the numbers of infantile deaths and the infantile death rates per 1,000 live births for the years 1956 to 1960.

TABLE 2

Period	Births Registered		Marriages		Deaths Registered			
	No.	Rate (a)	No.	Rate (a)	No.	Rate (a)	No.	Rate (b)
Year—								
1956.....	18,964	22.35	6,277	7.39	7,593	8.95	377	19.88
1957.....	19,536	22.35	6,581	7.53	7,576	8.67	403	20.63
1958.....	20,047	22.35	6,505	7.25	7,743	8.63	449	22.39
1959.....	20,372	22.12	6,614	7.18	7,943	8.62	422	20.71
1960.....	20,966	22.19	6,607	6.99	7,804	8.26	397	18.94

(a) Per 1,000 of Mean Population.

(b) Per 1,000 Live Births.

(c) LEGISLATION

Health Act and Health Act Regulations.—Section 123 of the Health Act was amended to give local health authorities more control over drains, ventilation, and sanitary requirements in new buildings. Regulations relating to qualifications of health inspectors were gazetted.

Food and Drugs Regulations.—The standards for gelatine and cocoa were amended to make them uniform with other States.

Dangerous Drugs Regulations.—Additional drugs as recommended by the World Health Organization were brought under control.

Noxious Trades Act and Regulations under the Noxious Trades Act.—Regulations were amended to include definitions of hide and skin drying, tanning, wool scouring and fellmongering as noxious trades.

A proposal to delete that portion of the Noxious Trades Area that overlapped a proposed extension of the new Gillman Industrial Area being developed by the South Australian Harbours Board was considered at a Conference between the Town Planner and representatives of the Harbours Board, the Engineering and Water Supply Department, the Corporation of the City of Enfield and the Department of Public Health. It was agreed that provided the Engineering and Water Supply Department released an area set aside for sewage treatment purposes the proposed deletion would still leave sufficient space for future development of noxious trades. The Engineering and Water Supply Department intimated that when the new treatment scheme was completed at Bolivar the area within the Noxious Trades Area would no longer be required. The deletion was recommended and the boundaries of the Noxious Trades Area were altered by Regulation accordingly.

(d) CONTROL OF INFECTIOUS AND NOTIFIABLE DISEASES AND TUBERCULOSIS

Statistics.—Infectious and notifiable diseases listed in the Second and Third Schedule of the Health Act and tuberculosis are notified to local boards of health and the Central Board of Health. Tuberculosis is notified to the Central Board of Health in the first place.

Those notified in the years, 1958, 1959 and 1960 are shown in Table No. 3.

TABLE 3

Infectious Diseases	Cases			Deaths		
	1958	1959	1960	1958	1959	1960
Acute infective encephalitis.....	7	7	10	2	7	2
Amoebiasis	2	2	2	—	2	—
Diphtheria	2	16	1	—	1	1
Diarrhoea, infantile infective	13	4	3	—	—	—
Dysentery, bacillary	57	61	73	2	3	—
Influenza in epidemic form	4	1,163	12	2	99	—
Malaria	—	1	1	—	—	—
Meningococcal infection	5	7	3	—	3	1
Ornithosis	6	1	2	—	—	—
Paratyphoid fever	3	—	1	—	—	—
Poliomyelitis	10	1	12	1	1	—
Puerperal pyrexia	3	2	3	—	—	—
Salmonella infection	59	45	72	4	1	—
Scarlet fever.....	133	232	168	—	—	—
Trachoma	—	1	—	—	—	—
Tuberculosis, pulmonary	269	240	255	57	42	36
Tuberculosis, other forms	33	43	33	4	3	3
Typhoid fever	3	7	1	—	—	—

Notifiable Diseases	Cases			Deaths		
	1958	1959	1960	1958	1959	1960
Acute rheumatism	8	8	2	—	—	—
Brucellosis	1	1	—	—	—	—
Chorea (St. Vitus).....	1	1	—	—	—	—
Erythema nodosum	1	—	2	—	—	—
Encephalitis following another disease	4	4	16	—	1	—
Hydatid disease.....	4	—	1	—	—	2
Infective hepatitis.....	307	749	1,121	5	5	10
Lead poisoning	—	2	—	—	—	—
Ophthalmia	—	1	—	—	—	—
Rubella	271	87	105	1	—	—
Tetanus.....	6	6	3	6	4	2
Eclampsia.....	—	—	1	—	—	—

During 1960 the following diseases were notified more often than in 1959; encephalitis, bacillary dysentery, eclampsia, erythema nodosum, hydatid disease, infective hepatitis, ornithosis, paratyphoid fever, poliomyelitis, puerperal pyrexia, rubella, salmonella infections and tuberculosis. Eclampsia was notified for the first time since it was made a notifiable disease in 1954.

The following were notified less frequently; acute rheumatism, infantile diarrhoea, influenza, meningococcal infections, scarlet fever, tetanus and typhoid fever. Lead poisoning, brucellosis, chorea, ophthalmia, malaria and trachoma were not reported at all.

Diphtheria.—The one notification of diphtheria was that of a child from a migrant hostel who died the day after admission to hospital. Neither the child nor its younger sister had been immunized. A toxigenic strain of *C. diphtheriae* gravis was isolated from swabs from the child's nose and throat. No source of infection was found. Of 700 people at the Hostel, 226 were given immunization injections.

Bacillary Dysentery, Salmonella Infections and Infective Hepatitis.—Bacillary dysentery, salmonella infections and infective hepatitis increased significantly. Cases occurred sporadically in all parts of the State. In many instances investigations did not reveal any source of infection and the patient was the only person affected in the family or house.

Typhoid.—Typhoid fever occurred in a person employed at a sewage treatment works. Organisms recovered were identified as *Salmonella typhi*, phage type 38. Investigations have not revealed any source of infection as yet.

Influenza.—This disease is reported when local boards decide that it is occurring in epidemic form in their areas. Sporadic cases were reported but no wide spread epidemics occurred as in previous years. Deaths from influenza are recorded whether the disease is being reported or not and they bear no relationship to reported incidence.

Vaccination with polyvalent influenza virus was provided for members of the Department of Public Health and some other Departments during the year.

Poliomyelitis.—The incidence of poliomyelitis increased slightly. Further details of the Department's control of this disease are given in the report of the Branch dealing with poliomyelitis prevention.

Tuberculosis.—The death rate from tuberculosis fell from 4.7 per 100,000 in 1959 to 4.1 in 1960 and the incidence from 30.7 to 30.4 per 100,000.

Immunization.—Returns received indicated that local boards of health immunized 703 children against diphtheria with diphtheria toxoid prophylactic, one against whooping cough with pertussis vaccine, three against diphtheria and whooping cough with combined diphtheria and whooping cough antigen, 14,950 against diphtheria and tetanus with combined diphtheria and tetanus antigen, 2,797 against tetanus with tetanus toxoid and 7,960 against diphtheria, whooping cough and tetanus with triple antigen. This makes a total of 25,414. Of these 33 were children in outback areas who were immunized by medical officers of the Department during visits to areas outside the control of local health authorities.

The above figures do not include children immunized by medical practitioners in their private practices.

(e) CONTROL OF VENEREAL DISEASES

During 1960, £2,285 was spent by the Department of Public Health on venereal disease investigation and treatment.

The majority of this amount was spent on bacteriological and serological tests for private practitioners.

A total of 63 patients were investigated at the Venereal Diseases Investigation Clinic for females at the Royal Adelaide Hospital.

A conference on venereal disease arranged by the National Health and Medical Research Council was held at the Department of Public Health, Melbourne, from 17th to 19th August, 1960. It was attended by representatives from the Commonwealth and State Health Departments. Dr. G. H. McQueen was the South Australian representative.

The causes for recent increases in the incidence of venereal disease in Australia and means of control were discussed. The Conference agreed that adequate effective control measures must provide for—

- (a) Adequate laboratory facilities for diagnosis.
- (b) Compulsory notification which could be anonymous.
- (c) Obligatory treatment.
- (d) Mandatory disclosure of defaulters in treatment.
- (e) Search for sources of infection.
- (f) Compulsory examination of persons suspected of being sources of infection.

With the exception of notification, all of these are, or may be implemented in South Australia under the provisions of the South Australian Venereal Diseases Act.

In the diagnosis of venereal diseases, the Conference recommended that careful clinical, dark ground and serological examinations should be done for syphilis. The serological examination should include a complement fixation test and one other different type of test.

For gonorrhoea it was recommended that standard procedure should include examinations of smears and culture of material for gonocci. In the female these should be taken from the vagina, urethra and rectum.

The Conference also recommended that information on methods of diagnosis and treatment of venereal diseases should be disseminated to general practitioners and steps should be taken to obtain their co-operation in administering legislation designed to control these diseases in the community.

(f) SUPERVISION OF ENVIRONMENTAL SANITATION

Officers of the Public Health Supervision Branch of the Department are responsible to the Central Board of Health for ensuring that provisions of the Health Act designed to keep the State healthy are carried out. They are also responsible to the Central Board of Health for ensuring that the requirements of the Food and Drugs Act are carried out throughout the State.

In areas where there are local health authorities these duties are the direct responsibility of the local authorities concerned and the Central Board and officers of the Branch have a supervisory and advisory function only.

Each health inspector of the Branch has a number of local board areas to inspect and each district medical officer of the Branch has an area of the State that is his responsibility.

Routine inspections are done by the inspector concerned. On these inspections he is usually accompanied by the medical officer of health or the health inspector of the local board of health concerned. Routine inspections are followed by health surveys by the medical officer and health inspector of the Branch responsible for supervision of the local board area concerned.

It has been the aim of the Department to do a routine inspection and a health survey of each local board area once a year.

In 1960 however, due to a large increase in work considered to be of a higher priority than routine inspections, the number of routine inspections was reduced to 81 and the number of surveys to 29.

The number of areas for sub-division into building allotments submitted by the Town Planner for inspection by officers of the Branch during 1960 increased to 50.

The proposed subdivisions were into allotments varying in number from five to 1,536. Reports on existing conditions, or conditions likely to develop if the subdivision took place, that would affect the health of people or that were or would become nuisances were made.

The main problems from a public health point of view were provision of water and disposal of refuse and of waste liquids. Many of the proposed subdivisions were in areas without sewerage or reticulated water supplies and unlikely to have either for many years. In many subdivisions it was necessary to report that the areas of many proposed allotments were not considered sufficient for disposal of liquid wastes normally associated with domestic dwellings.

Other projects of special interest included investigation of each child admitted to the Children's Hospital with accidental poisoning, investigation of dust nuisance at Port Augusta, commencement of a survey of air pollution in the metropolitan area, investigation of conditions at country slaughterhouses where animals are slaughtered to provide meat for consumption in the metropolitan area, investigation of boarding houses that were reported to be unlicensed rest homes, investigation of conditions at child minding centres and the preparation of proposed regulations under the Health Act to provide for the health of children attending such centres, investigation of dust produced by sand blasting operations and the preparation of information for legal proceedings authorized by the Central Board of Health against the occupier of premises where dust produced by sand blasting was considered to be the cause of a dust nuisance and a hazard to health, and investigation of "all purpose" septic tank sewage disposal systems submitted by local boards for approval for compulsory installation.

(g) REPORT OF THE DISTRICT MEDICAL OFFICER FOR THE NORTHERN AND WESTERN DISTRICT

Inspection and Surveys.—General inspections were conducted throughout the year and follow-up inspections according to schedule.

General Sanitation.—A steady improvement in general sanitation is evident. This is specially noticeable in the standard of sanitation in food shops. The development of road-houses in the area has, on the whole, been an asset as modern premises lead to better hygiene.

Waste Water Disposal.—A matter that gives rise to some concern is the disposal of waste water and effluent in some towns. The supply of reticulated water to so many towns has led to a greater use of water and consequently increased waste water for disposal. The ground level of water in many places has risen. A tree planting campaign to take up water is underway in many towns.

Special Areas.—

Ernabella Mission.—This was visited and immunization carried out as on previous visits. A number of cases with signs and symptoms resembling poliomyelitis were seen, some in children who had had two injections of vaccine.

Coober Pedy.—The provision of a permanent water supply here has progressed. A hydrological survey was done by two officers of the Mines Department and a bore site of promise was selected in the "township". It is expected that this will now be proceeded with. Coober Pedy is of public health interest as an essential stopping place on the road to the Northern Territory.

Oodnadatta.—The water position in this town has been much improved and stabilized by the handing over of the Commonwealth Railways Water Scheme to the Engineering and Water Supply Department. A permanent and good quality supply is now ensured.

Marree.—Suggestions for improvement of the water supply have been made, as this is an increasingly important cattle staging and railway centre.

(h) REPORT OF THE DISTRICT MEDICAL OFFICER FOR THE SOUTH EASTERN AND UPPER MURRAY DISTRICTS

Inspections and Surveys.—Routine "follow up" health surveys, were curtailed by pressure of other work and staff shortages within the Branch. Local Boards visited were:—

Upper Murray	2
South East.....	2
Adelaide Hills	1

Conditions generally were maintained at a satisfactory level and more interest by local Boards in health matters was evident in several areas.

Epidemiology.—Several outbreaks of food poisoning were investigated and all cases indicated the need for increased care and control of food in the community. This applies more particularly to premises where food is prepared, stored or sold, to methods of transport and to persons who handle food.

Several Local Government Association conferences were attended.

A survey of water supplies in country schools was commenced and early results showed that this aspect will need further attention.

(i) SUPERVISION OF FOOD AND DRUGS SOLD IN SOUTH AUSTRALIA

Routine Supervision Surveys.—The Food and Drugs Act requires the Central Board of Health and local and county boards of health to ensure that food and drugs are sold in a “pure and genuine condition”. For this purpose officers of the Public Health Supervision Branch of the Department of Public Health and local and county boards are appointed inspectors under the Food and Drugs Act.

During routine inspections and health surveys by these officers, places where food and drugs are manufactured, produced or prepared for sale are inspected. Places where they are sold are inspected and, where considered necessary samples are taken and submitted to the Government Analyst for analysis. Table No. 4 shows the results of analyses carried out during 1960.

During the year routine surveys of food and drugs for sale were carried out by officers of the Branch in eight local authority areas and these were followed by follow-up surveys.

These included four routine surveys and three follow-up surveys in local authority areas within the metropolitan area. Here the Metropolitan County Board has taken over from health authorities in the area all powers, duties and liabilities imposed on them by the Health Act and Food and Drugs Act in respect of food, drugs and premises where food and drugs are manufactured, prepared, stored and sold.

TABLE 4.—RESULTS OF ANALYSES OF FOOD AND DRUGS FOR 1960

Article	Number Submitted	Not up to Standard or Incorrectly Labelled
Brandy	4	4
Bread	24	—
Cheese	3	1
Coconut desiccated	341	8
Coffee	9	—
Cream	2	—
Fish—Seelachs	5	5
Salmon, tinned	1	—
Flour	13	—
Imitation vanilla essence	1	—
Jam	1	—
Kola Beer	1	—
Lemonade	1	1
Milk—fresh	1,208	35
powdered	1	—
Minced meat and sausage	69	23
Mutton—rolled	1	1
Pickles—gherkins	5	—
Sauce—tomato	12	—
Seasoning	1	—
Sugar	1	—
Water	2	2
Whisky	11	2
Wine	12	11

Reconstituted Milk.—Regulation 45, sub-paragraph 24 under the Food and Drugs Act deals with reconstituted milk. Under Clause (f) 1 and 2 of the sub-paragraph the Central Board of Health may issue permits to manufacture reconstituted milk, to label it “Pasteurized Milk” and to sell it as such for any four consecutive months in any year. The Central Board of Health may also specify what ingredients shall be used in the manufacture of such reconstituted milk.

In accordance with the Regulations the Central Board of Health issued permits in 1960 to two companies to manufacture reconstituted milk from milk, milk products and water, to label it “Pasteurized Milk” and to sell it as such.

Returns from these companies show that during the year they sold 334,026 gallons of reconstituted milk as pasteurized milk. The ingredients used in its manufacture were milk, dried skim milk powder, water and fresh or deep frozen cream. Whole milk accounted for 90 per cent of the final product before pasteurization.

Four other companies were also given permits by the Central Board of Health during 1960 to manufacture reconstituted milk from milk and milk products, and to sell it as pasteurized milk. In these cases 12,055 lb. of skim milk powder was added to 544,423 gallons of milk deficient in solids-not-fat before pasteurization to bring the protein content up to standard.

Before permits were granted manufacturers’ premises, and equipment to be used in the reconstitution of milk were inspected and in each case considered to be suitable by officers of the Central Board of Health.

Hand Washing Facilities in Food Shops.—Proposals for improved hand washing facilities in food shops were prepared and circulated. Comments received from trade representatives are still being considered.

Glass Washing.—Progress was made in preparation of draft regulations for glass washing. Many useful comments were received from the industry concerned and a final draft is almost completed.

Kangaroo and Buffalo Meat.—Proposals for the control of the sale of these meats, both for consumption by human beings and pet animals were prepared and considered. It is expected that the matter will be finalized in 1961.

Uniform Standards.—Further draft uniform standards have been considered. The procedure for the examination and adoption of uniform standards by State Committees is working well and steady progress is being made in all States in the adoption of standards.

Desiccated Coconut.—Samples were taken from approximately 10 per cent of all containers of desiccated coconut imported into South Australia from overseas during 1960. These were submitted to the Institute of Medical and Veterinary Science for bacteriological examination.

If pathogens were isolated from any sample, coconut in all containers in that shipment bearing the same brand as the container from which the sample was taken were destroyed under the South Australian Food and Drugs Act.

Pathogens found in eight samples involved the destruction of approximately 15.6 tons of desiccated coconut in 575 containers. Of these, 535 containers were from Ceylon and 40 were from the Philippine Islands.

The following pathogens were isolated—

S. paratyphoid, B., phage type 3B var. 2.,
S. cubana,
S. kotte,
Sh. flexneri G.

Supervision of Wines and Spirits.—During the period 1st January to 31st December, 1960, tests of wines and spirits offered for sale in 289 licensed premises were made. Premises included hotels, wine saloons and stores in metropolitan and country areas.

A total of 4,690 samples of wines and spirits were tested. This represents an average of 17 tests per visit.

Samples which were shown to be not of the required standard were obtained from 21 premises.

The Central Board of Health authorized legal proceedings under the Food and Drugs Act against 12 of the licensees concerned and issued warnings to the remainder.

Six of the 12 proceedings authorized were conducted during 1960 and were successful. The remaining six were still pending at the end of the year.

(k) SUPERVISION OF INDUSTRIAL HEALTH

Administration.—Industrial health problems referred to the Department by other Departments, local boards and industrial organizations were investigated and reports and recommendations were made by Officers of the Public Health Supervision Branch.

Technical officers of the Department of Mines, the Department of Chemistry and the Institute of Medical and Veterinary Science have assisted with these investigations. Their help has been valuable and is appreciated.

The industrial health work of the Branch is continuing to grow due to more and more problems being submitted for investigation by private industry. Steps are in hand to provide staff to conduct industrial health surveys, to detect and correct conditions before damage has been caused.

A biophysicist who was temporarily transferred to the Department of Public Health from the Department of Mines to investigate the existence of hazards to health associated with the use of ionizing radiation has been able to help with other investigations when not engaged on investigation of ionizing radiation.

Organic Mercurial Fungicides.—In order to investigate the hazards to health associated with the use of organic mercury preparations as fungicides, arrangements were made to examine the urines of a number of workers using methyl mercury dicyandiamide (Panogen) and methoxy ethyl mercury chloride (Cerosan) as fungicides to treat seed grain. When the investigations were commenced it was considered that any findings above 0.1mg. of mercury per litre of urine indicated that an excessive amount of organic mercury had been or was being absorbed.

None of the findings during the early part of the year exceeded this amount. Towards the end of the year mercury in the urine of one worker increased to a level at which signs and symptoms of organic mercury poisoning would have been expected to have appeared if the mercury in the urine was from organic mercury.

As he had no evidence of mercury poisoning it was assumed that he was getting mercury in the inorganic form from some other source than at work.

On investigation it was found that he was taking proprietary pills which contained metallic mercury for "rheumatic pains".

Two others, considered by physicians to have evidence of organic mercury poisoning, did not have higher mercury-in-urine levels than others in the group with no evidence of poisoning. It is considered that if their signs and symptoms were due to organic mercury poisoning the damage occurred before the investigation started when their mercury-in-urine levels may have been higher, possibly for a short interval due to an acute accidental exposure.

It was concluded from the results of the investigation and from reports of hazards associated with the use of organic mercury preparations elsewhere that :—

1. Acute accidental exposure to organic mercury preparations may cause permanent damage to nerve cells.
2. That if acute exposure can be avoided no damage will result if the mercury content of urine of exposed persons is maintained below 0.05mg. per litre.

Noise in Industry.—Complaints of excessive noise in a wood-working factory were received and investigated. New wood working machines had been installed which though very efficient were the cause of noise with an intensity above 90 decibels in an area when men were required to work. Audiograms were done on those exposed and it was found that they showed evidence of traumatic deafness.

Attempts to reduce the intensity of the noise to a safe level were not successful so those exposed were advised to wear ear-plugs to reduce the noise reaching their ear-drums to a safe level ; and to report to the Department for audiograms, at regular intervals, to see if measures to prevent further traumatic deafness occurring are effective.

Industrial Hygiene Committee.—The Principal Medical Officer attended one of the two meetings of the Industrial Hygiene Committee of the National Health and Medical Research Council held during the year.

Dr. C. O. Fuller (District Medical Officer) attended the other meeting.

Department of Mines Uranium Project.—Pre-employment and annual periodic medical examinations of persons employed on the uranium project of the Department of Mines were continued. During the year, 94 medical examinations were completed in Adelaide. At Radium Hill and Port Pirie 263 medical examinations were completed. Clinical examinations were done by medical officers of the Public Health Supervision Branch ; periodic X-ray examinations were done at Radium Hill, Port Pirie and Adelaide by the X-ray units of the Department of Public Health ; blood examinations at Adelaide were done at the Institute of Medical and Veterinary Science ; and at Port Pirie and Radium Hill blood examinations were done by the mobile unit of the Institute of Medical and Veterinary Science.

Medical Examinations for Employment, and to contribute to the South Australian Superannuation Fund.—Medical examinations of applicants for permanent appointments in the Public Service are done by medical officers of the Public Health Branch. In addition, medical examinations of persons, except teachers and railway employees desiring to contribute to the South Australian Superannuation Fund or in receipt of invalid pensions from the Fund are done by medical officers of the Branch.

A total of 425 of the above examinations were completed during 1960. These include medical examinations of applicants for positions in the State Bank and the South Australian Institute of Technology and for permits to visit reserves for aborigines.

Silicosis Committee.—Medical examinations, required by the Silicosis Committee, of employees of the Department of Mines working where a silicosis hazard exists were also done.

(l) HEALTH EDUCATION

Officers of the Public Health Supervision Branch again contributed to the health education work of the Department of Public Health.

“Good Health” and Newsletters.—A quarterly magazine “Good Health” and monthly “Newsletters for Medical Officers of Health” are used by the Department as a regular means of disseminating information on public health matters.

Articles were written by officers of the Branch for each issue of “Good Health”.

Included in each newsletter there is a list of diseases reported to the Central Board of Health during the previous month. Other items of public interest to which reference was made were reconstituted milk, housefly control, hazardous substances causing accidental poisoning in children, outbreak of staphylococcal food poisoning, quadruple antigen and immunization, kangaroo, buffalo and horse meat for human consumption, two pint flush system for septic tank sewage disposal installations, section 123 of the Health Act, Health Week 1960, and safety belts in motor vehicles.

Royal Society of Health.—Examinations for diplomas and certificates of the Royal Society of Health are conducted by the Society’s Board of Examiners in South Australia. Theoretical training of candidates in the metropolitan area is provided by the Institute of Technology.

Correspondence courses are also arranged by the Technical Correspondence School of the Education Department. Material for the courses is prepared and the correcting of assignments is done by the Chief Inspector of the Branch. Practical work required by the Royal Society of Health for candidates for its diplomas and certificates is arranged by officers of the Branch.

At the last examinations of the Royal Society of Health in Adelaide, 20 candidates sat for the Diploma of the Royal Society and three sat for the Meat and Other Foods Certificate. Of these, 13 obtained the Diploma and three, the Certificate.

National Health Week.—National Health Week was held from 16th October to 23rd October, 1960.

Health week always has a slogan agreed upon by all States. Sometimes the theme is broad, sometimes it is specific. In 1959 the theme was “Clean Hands for Good Health”. In 1960 the campaign had a broad theme, “Community Health is Your Responsibility”. In South Australia a particular aspect of this theme was selected, “Prevent Summer Infections”, because of the infectious diseases which tend to reach a peak in summer. Health week then became the springboard for a general health education campaign during the summer months. Its aim was to reduce the spread of infectious diseases.

Community health is everyone’s responsibility. This is true in many ways. It concerns healthy habits in the home, at work and play, and particularly in bringing up children. Cleanliness is one of the most important means of preventing the spread of communicable diseases ; personal cleanliness, cleanliness in the home and cleanliness in the community

Local authorities try to control diseases caused by pests such as rats and flies, but that work is difficult or impossible without the co-operation of the individual citizen. Pests breeding in backyards threaten the health of the whole community, and health inspectors cannot keep an eye on every breeding ground in their district. That is why each householder must co-operate for the sake of his family, his neighbours and his community.

Summer infections include gastro-enteritis, hepatitis, typhoid fever, food poisoning and dysentery. All are diseases which occur too frequently in winter, but usually reach a peak in summer.

Although the effects of these diseases on the sufferer are different, they have one thing in common, they are spread from person to person and very often by flies.

Publicity was concentrated on the following five golden rules. If these be observed the danger of summer diseases will be reduced considerably :—

- Always wash your hands after visiting the toilet.
- Never handle food with dirty hands.
- Attack flies at feeding and breeding ground.
- Have insect-proof screens on all windows and doors.
- Destroy flies that enter the home.

This year the Department was assisted with the Health Week publicity work involved, by Leonard S. Barker and Associates, through their Adelaide Associates, Shan Hoskyns and Associates, Ltd.

Other Health Education Projects.—During the year officers of the Branch took part in many special health education projects arranged by the Department, local boards and other organizations.

3. SCHOOL HEALTH BRANCH

During the year the professional staff of the School Health Services consisted of the Principal Medical Officer for Schools, seven full-time and one part-time medical officers, eight dental officers, ten nurses, eight dental assistants, one part-time audiologist and two audiometristes. Several changes of staff occurred during the year, requiring replacements. Dr. Patricia Sprod was Acting Principal Medical Officer during the eight months leave of absence of Dr. Casley Smith.

MEDICAL SERVICES

The number of children examined in State schools was 54,868 in 1960. This figure includes 54,040 children seen in schools by medical officers of the School Health Services, and 828 school children seen by local doctors on Eyre Peninsula acting for the Department. The school enrolment in 1960 was 170,077. Medical officers of the Department visited 235 schools during the year and Eyre Peninsula doctors saw the children at five schools.

The following table (Table 5) shows the number of schools visited, children examined and defects noticed by medical officers of the School Health Services :—

TABLE 5

	Metropolitan	Country	Total
Schools visited	86	149	235
Children examined	34,080	19,960	54,040
Defects found :—			
Vision (excluding spectacles)	2,543	1,271	3,814
Wearing spectacles	2,420	964	3,384
Hearing	568	693	1,261
Nose and throat	277	285	562
Teeth	6,718	4,400	11,118
Heart	162	144	306
Skin	723	431	1,154
Lungs	84	63	147
Allergies	1,476	1,095	2,571
Epilepsy	38	19	57
Deformities, postural	192	93	285
Deformities, foot	980	690	1,670
Other conditions (including leg deformities (368), cerumen (1,339), colour blindness (318), enuresis (742))	3,507	3,092	6,599
Total defects recorded	19,688	13,240	32,928

To enable comparisons to be made with other years Table 6 shows, for the last six years, the rates per 10,000 children examined of certain defects formally notified to parents.

TABLE 6—DEFECTS NOTICED PER 10,000 CHILDREN EXAMINED

Year	Vision	Hearing	Nose and Throat	Teeth	Heart	Allergies	Epilepsy
1955	691	252	256	3,136	38	*	*
1956	738	244	303	2,599	52	*	*
1957	622	180	231	3,009	48	315	5
1958	605	213	166	2,444	61	321	10
1959	776	140	146	2,092	60	364	12
1960	706	233	104	2,059	57	476	11

* Not rerecorded

Notices were sent to the parents of 11,118 children needing dental attention. Children already under private dental supervision and children who were examined by departmental dentists are not included in those statistics.

Medical officers of the Department examined 34,080 children in 86 of the metropolitan schools and 19,960 children in 149 country schools during 1960.

Eyre Peninsula Scheme.—Doctors residing at five centres on Eyre Peninsula assisted the School Health Services by examining the children attending schools in their areas. 828 children attending five schools were seen by them. The Department appreciates the work of those doctors who have been able to continue their work for us. It is anticipated that more help will be available from them in 1961.

TABLE 7.—EYRE PENINSULA SCHEME

Schools visited	5
Children examined	828
Defects formally notified—	
Vision (excluding spectacles)	88
Wearing spectacles	20
Hearing	22
Nose and throat	17
Teeth	102
Heart	6
Skin	11
Lungs	6
Allergies	11
Epilepsy	—
Deformities, postural	5
Deformities, foot	—
Other conditions (not classified)	45
Total defects recorded	333

Infections in School Children.—The numbers of communicable diseases reported to teachers in State schools are shown in Table 8.

TABLE 8

Year	Diphtheria	Scarlet Fever	Measles	Rubella	Whooping Cough	Chicken Pox	Mumps	Poliomyelitis	Infective Hepatitis	Other Conditions
COMMUNICABLE DISEASES										
1956.....	—	179	5,027	1,178	227	1,856	2,607	30	117	143
1957.....	1	184	499	1,496	97	2,195	1,556	3	26	83
1958.....	—	131	3,469	232	163	2,078	987	2	53	116
1959.....	2	154	943	110	39	1,948	2,374	—	110	106
1960.....	—	163	3,707	68	117	1,588	2,436	—	387	85
COMMUNICABLE DISEASES PER 10,000 CHILDREN ENROLLED										
1956.....	—	13.2	371.6	87.1	16.7	137.2	192.7	2.2	8.6	10.4
1957.....	0.1	12.6	34.3	102.7	6.7	150.7	106.8	0.2	1.8	5.7
1958.....	—	8.5	225.4	15.0	10.6	135.0	64.1	0.1	3.4	7.5
1959.....	0.1	9.4	58.0	6.7	2.4	119.9	146.2	—	6.7	6.5
1960.....	—	9.5	218.0	4.0	6.9	93.4	143.2	—	22.6	4.9

The total number of these communicable diseases reported was 8,551. This is 2,765 more than in 1959, due to an increase in the number of cases of measles and infective hepatitis. There were no cases of poliomyelitis. Included in other conditions were five cases of meningitis and one of typhoid fever.

Audiometric Testing.—Audiometric testing was conducted in 172 State schools and in 25 pre-school kindergartens associated with the Kindergarten Union of S.A. Inc. A total of 35,273 children had pure-tone audiometer tests. These tests were carried out by medical officers, audiometristes and school nurses. Of the children tested, 1,533 (4.3 per cent) were found to have some hearing loss at the time of testing. Their parents were notified accordingly and arrangements were made, where possible, for further tests in the sound-proof room of the Department, where frequently more satisfactory results were obtained. Statistics of these audiometric tests are shown in Table 9. These figures are independent of the figures in Table 5.

TABLE 9.—AUDIOMETRIC TESTS AT SCHOOL

	Pre-School Kindergartens	Metropolitan Schools	Country Schools	Total
Schools visited	25	82	65	172
Children tested	1,154	21,009	13,110	35,273
Defects	31	898	604	1,533

The number of audiometric tests made in the sound-proof room of children referred by all officers was 1,880 as is shown in Table 10.

TABLE 10.—AUDIOMETRIC TESTS IN THE SOUND-PROOF ROOM

	Pre-school	Primary	Secondary	Student Teachers	Total
Children from the metropolitan area	62	1,230	186	—	1,478
Children from country areas	10	204	48	—	262
Leaving teaching scholars and students attending Teachers Colleges	—	—	—	137	137
From Special Homes (Minda and Townsend House)	—	—	—	—	3
	72	1,434	234	137	1,880

Other Medical Examinations.—One thousand, three hundred and thirty six female and 852 male students entering or leaving the Teachers Colleges or attending State Schools as Leaving Teaching Scholars were medically examined in 1960. Teachers referred by the Education Department were seen before returning to duty from sick leave. All applications from teachers for invalidity pensions were considered, and, where necessary, the applicants were examined. There were 440 teachers applying for permanent appointments, superannuation or temporary positions seen during the year. Children travelling interstate with sports teams were given a medical examination.

Health Lectures.—During the year, Dr. Sprod gave three hygiene lectures a week to Class B2 students at Wattle Park Teachers College (approximately 130 students). In the third term, she lectured to three groups at Adelaide Teachers College and Dr. Rugless gave lectures to two groups each week. Two lectures a week were given to the two trainee teacher groups of older women during the first term. Examination papers were set and marked.

Mothers' Clubs.—There were a number of requests for speakers at mothers' clubs, and school welfare clubs. Doctors addressed 20 clubs in the city and six in the country. (Total 26).

Pediatric Refresher Course.—Permission was granted for medical officers to attend the Pediatric Refresher Course at the Adelaide Children's Hospital. Six doctors from the School Health Services attended the course.

Tinea Capitis at Pt. McLeay School.—Children at Meningie and Pt. McLeay schools were examined for Tinea Capitis. Cultures were made by a member of the staff of the Institute of Medical and Veterinary Science and children were treated successfully with griseofulvin.

Children's Hour.—Short items on health have been requested for the "Children's Hour" for 1961. Several have been prepared by doctors and forwarded (anonymously).

Health Education.—Assistance was given in the preparation of background notes for teachers for health education in schools.

Civil Defence.—Permission was granted for a sister to attend the Civil Defence School at Mount Macedon, Victoria, in December. Her report has been made available to the Department.

University Health Seminar.—During the year the Acting Principal Medical Officer attended this seminar at the University. It was stressed that general physical examination of students before they start such a course, does not detect the badly adjusted student who is likely to break down, or to fail during the course.

Follow-up Work.—This was continued by the school nurse detailed for this work, who was also assisted by the senior nurses. Ninety five metropolitan schools were visited once. Of these 50 schools had second checks made, when outstanding cases were further investigated and the parents were either visited or telephoned. Fifty homes were visited, help and advice being given by the nurse. The following results show the benefit derived from follow-up work:—

First Follow-up—(95 schools)—
3,047 children received attention
824 children had not received attention
Second Follow-up—(50 schools)—
278 children received attention
125 children had not received attention
Total—
3,325 children received attention

Defect Notices Returned.—Under an arrangement approved by the British Medical Association, 2,687 forms were returned by doctors and specialists to whom children were taken following the discovery of defects. The co-operation received from many doctors and specialists is of great value to the School Health Services and I am very grateful for their help.

DEAFNESS GUIDANCE CLINIC

The Deafness Guidance Clinic completed its fourth year with a total of 992 attendances by children. Of these 484 were initial attendances and 508 were for retesting.

The new cases comprised 21 pre-school children, 367 primary school children and 94 from high schools. One came from Minda Home and one from Townsend House School for the Deaf. Four hundred and three were discovered by officers of the School Health Services or by the Clinic's Audiometristes. Of the 81 remaining, 33 were referred by their own doctors and 36 were brought directly to the Clinic by their parents.

Retesting was carried out on 13 pre-school children, 425 primary school children and 70 high school children.

Of those attending for initial tests 86 were discharged as having no significant hearing loss, 277 were referred to their general practitioners and 35 to specialists or hospitals. Eighty-five with doubtful losses were requested to return for a later test without being referred for treatment.

Of those attending for retest 113 were discharged, 267 were referred to general practitioners, 18 to specialists or hospitals and 110 were requested to return for further tests without referral for treatment.

The liaison with the Education Department through the Advisory Panel for Deaf and Hard of Hearing Children was maintained throughout the year. At the end of each month a list of all children discovered with significant loss was forwarded to the Panel and 138 children were made the subjects of specific letters. Of these 74 were discovered at the initial test, and 62 discovered on retesting were reported mainly because of lack of response to treatment or because they had changed schools, or because of lack of progress at school.

It is expected that the current year will see an even greater number of children pass through the Clinic.

TABLE 11.—ATTENDANCE AT THE DEAFNESS GUIDANCE CLINIC
INITIAL ATTENDANCES

	Pre-school	Primary	Secondary	Government Departments	Institutions	Total
Metropolitan	17	263	63	31	—	374
Country	4	104	31	—	2	141
	21	367	94	31	2	515

Children referred to:—

	Pre-school	School-age	Government Departments	Institutions	Total
General Practitioners.....	10	266	—	1	277
Otologists	—	8	—	—	8
Adelaide Children's Hospital	—	21	—	—	21
Royal Adelaide Hospital.....	—	6	—	—	6
Re-testing without treatment	7	78	7	1	93
Discharged	4	82	24	—	110
	21	461	31	2	515

RETESTS

	Pre-school	School-age	Government Departments	Total
First retests	11	234	6	251
Subsequent retests	2	258	2	262
	13	492	8	513

Children referred to:—

	Pre-school	School-age	Government Departments	Total
First retests—				
General Practitioners	5	134	1	140
Otologists	1	3	—	4
Adelaide Children's Hospital.....	—	5	—	5
Royal Adelaide Hospital	—	4	—	4
Re-testing without treatment	1	39	1	41
Discharged	4	49	4	57
	11	234	6	251
Subsequent retests—				
General Practitioners	1	127	2	130
Otologists	—	2	—	2
Adelaide Children's Hospital.....	—	2	—	2
Royal Adelaide Hospital	—	1	—	1
Re-testing without treatment	—	67	—	67
Discharged	1	59	—	60
	2	258	2	262

SCHOOL DENTAL SERVICES

The staff at the beginning of the year was eight dentists and eight assistants. Four of the eight dentists were trained under the Department's studentship scheme. This strength was maintained until August, when one dentist resigned to work overseas.

Departmental policy with regard to school children has this year remained unchanged, but it was decided, towards the end of the year, that dentists could be more effectively employed during school vacations, in treating patients in Children's Welfare Institutions, using the dental caravans.

Following this decision, children at Struan Farm, Magill Boys' Training School, and Vaughan House were treated in the period just prior to Christmas. Fifty one children in all were fully treated in this period.

The areas that were treated during the year were—

Area No. 1.—Far West Coast.

Area No. 2.—Eastern Eyre Peninsula.

Area No. 3.—Far North.

Area No. 5.—Mid-north East.

Area No. 9.—South.

Area No. 10.—South West.

Area No. 11.—Murray Flats.

Area No. 13.—Upper South East.

It would appear from an analysis of the work done in most areas in preceding years, that there is an improvement in the general state of the children's teeth from year to year.

The following is an analysis of work done by departmental dentists in schools—

Children examined	10,287
Children treated fully	3,432
Fillings	14,216
Extractions	4,365
Other treatments	3,390
Number of visits	21,627
Number of schools treated	84

Childrens Welfare institutions during the year—

Patients examined	144
Patients treated fully	51
Fillings	237
Extractions	45
Other treatments	50
Number of visits	242
Number of institutions visited	3

Of all patients examined in schools in city and country, 76.9 per cent required treatment and in Children's Welfare Institutions, 86 per cent required treatment.

Survey of Port Lincoln School Children.—In February, a survey of Port Lincoln School children was made to discover the effects of the teeth of drinking water from Uley Wanilla water scheme, known to contain one part per million fluorine. It was conducted by a team of six dentists, from the School Health Services and the Adelaide University—1,220 children were examined as to the water they drank and their dental caries. From these results an assessment was made of all the children up to 10 years. It was found that 139 drank rainwater and 135 drank tap water. The results were as follows :—

<i>Rainwater group (139)</i>	<i>Tap water group (135)</i>
851 teeth with caries	599 teeth with caries
6.12 teeth with caries per child	4.44 teeth with caries per child

This difference in decay rates has a statistical significance.

Dental Bursaries.—The dental bursary system has continued to work satisfactorily. In 1960, 12 bursary students were in training and four past students were serving on the dental staff. In 1961 three more will start work in the schools. It is the aim to have 12 students training under the scheme, who eventually will replace dentists who resign, and also gradually add to the dental staff.

With 10 dental teams in 1961, 10 out of the 14 areas will be commenced or continued, and the results of treatment should begin to show in the older children.

4. POLIOMYELITIS BRANCH

Incidence.—During the year ended 31st December, 1960 there was a rise, compared with the two previous years, in the number of cases of poliomyelitis reported. The yearly cases reported since the last epidemic started in May, 1949 appear in Table 12.

(Note.—Because a case was "reported" does not necessarily mean that it was later confirmed as poliomyelitis.)

TABLE 12—REPORTED CASES OF POLIOMYELITIS IN SOUTH AUSTRALIA, 1949-1960.

Year.	Cases.			Deaths.		
	Metropolitan Area.	Other Districts.	Total.	Metropolitan Area.	Other Districts.	Total.
1949.....	490	90	580	15	5	20
1950.....	816	157	973	7	10	17
1951.....	1,012	479	1,491	39	23	62
1952.....	435	274	709	7	5	12
1953.....	287	111	398	11	10	21
1954.....	123	53	176	2	3	5
1955.....	110	72	182	5	1	6
1956(a).....	58	64	122	2	1	3
1957.....	5	11	16	1	—	1
1958.....	5	5	10	1	1	2
1959.....	1	—	1	—	—	—
1960.....	9	3	12	—	—	—

(a) The Salk immunization programme started in South Australia on 28th June, 1956.

Of the twelve cases of suspected poliomyelitis reported during 1960, nine were considered to be suffering from poliomyelitis; details of the twelve cases are shown in Table 13.

TABLE 13.—DETAILS OF TWELVE SUSPECTED CASES REPORTED IN YEAR ENDING 31st DECEMBER, 1960

Case No.	Age	Sex	Specimens Available for Laboratory	Virus Isolated	Paralytic illness	No. of "Salk" injections prior to onset illness
REGARDED AS POLIOMYELITIS						
1	1.3 years	Male	Yes	Poliovirus 1	Yes	—
2	2.9 years	Male	Yes	Poliovirus 1	No	—
3	5 years	Male	Yes	Poliovirus 1	No	—
4	2.9 years	Female	No	—	Yes	—
5	4.11 years	Female	Yes	Poliovirus 1	Yes	—
6	8 years	Male	Yes	Poliovirus 1	Yes	—
7	3 years	Female	No	—	Yes	1
8	3 years	Male	Yes	Poliovirus 1	Yes	—
9	6 years	Female	Yes	Poliovirus 1	Yes	—
NOT REGARDED AS POLIOMYELITIS						
10	3 years	Male	Yes	—	No	2
11	30 years	Male	No	—	Yes	—
12	Under 15 years	Female	No	—	No	—

NOTE.—Case 7 received one injection a year before her illness; she did not attend for the second or third injection when due.

It will be seen from the above table that all poliovirus isolations during 1960 were Type 1. Table 14 sets out the types of polioviruses isolated in South Australia since 1956.

TABLE 14.—NUMBERS OF EACH TYPE OF POLIOVIRUS ISOLATED FROM SOUTH AUSTRALIAN SPECIMENS FROM 1956-1960

Years Ending	Poliovirus Type 1	Poliovirus Type 2	Poliovirus Type 3
31st December, 1956	3	2	18
31st December, 1957	3	—	4
31st December, 1958	—	—	—
31st December, 1959	1	—	—
31st December, 1960	15	—	—

NOTE.—Of the fifteen isolations in 1960, seven were from symptomatic causes of poliomyelitis and eight from asymptomatic contacts.

Investigation and determination of cases.—Since the start of the Salk programme on 28th June, 1956, reports of suspected cases have been investigated as far as possible by the Principal Medical Officer (Poliomyelitis) and details have been sent to the Commonwealth Surveillance Committee which meets in Melbourne. The members of this specialist Committee are not otherwise connected with the Salk programme and they make the final decision on whether a case should be accepted statistically in evaluating the efficacy of the Salk vaccine. From 28th June, 1956 to 31st December, 1960 details of 137 cases reported as suspected poliomyelitis were referred to the Committee who accepted 79 of these cases as poliomyelitis.

TABLE 15.—RESULTS OF CASES DETERMINED BY SURVEILLANCE COMMITTEE IN THE PERIOD 28th JUNE, 1956 TO 31st DECEMBER, 1960. (BASED ON DATE OF ONSET OF ILLNESS AND NOT DATE OF NOTIFICATION).

Period	Total cases considered by Committee	0-14 Years						Over 15 years			
		Poliomyelitis		Not Poliomyelitis		Poliomyelitis		Not Poliomyelitis			
		Vaccinated	Not Vaccinated	Vaccinated	Not Vaccinated	Vaccinated	Not Vaccinated	Vaccinated	Not Vaccinated		
		1	2	3							
Six months ending 31/12/56	58	3 (a)		26	6	1	—	19	—	3	
Year ending 31/12/57	33	1 (b)	1 (c)	3	9	—	—	13	1	5	
Year ending 31/12/58	33			1	9	4	—	2	2	15	
Year ending 31/12/59	3			2	1	—	—	—	—	—	
Year ending 31/12/60	10	1 (d)		7	1	—	—	—	—	1	
Total	137	5	1	—	39	26	5	—	34	3	24

NOTE.—(a) These three cases who received one injection in the six months ending 31/12/56 all developed poliomyelitis within a week of their first injection and all three had been sick prior to the injection. It was clear from the investigations that these children were all suffering from poliomyelitis before the injection was given. It was not expected that the vaccine would prevent development of the disease in these circumstances. These three subjects reasonably could be regarded as non-immunized subjects.

(b) This child received one injection only. As no specimens for laboratory investigation were made available it was not possible to confirm, or exclude, the diagnosis of poliomyelitis. However, it was decided to accept the case for statistical purposes.

(c) This case in 1957, was a child of six years who had received two injections. Again no specimens could be obtained and the diagnosis of poliomyelitis, whilst not proven, was accepted.

(d) This three year old girl who contracted paralytic poliomyelitis in 1959, received one injection a year before her illness but did not attend for the second and third injections when due.

Six of the 79 cases occurred in partially immunized children within the age group 0-14 years. No case occurred in any person who had received all three injections and none occurred in any of the "over 15 years" age group who had received Salk injections.

In the same period (28th June, 1956 to 31st December, 1960) the Committee accepted 39 NON-immunized children in the age group 0-14 years and 34 NON-immunized persons over 15 years of age as cases of poliomyelitis.

This means that in South Australia since 28th June, 1956, there have been 73 accepted cases of poliomyelitis in NON-immunized persons compared with six cases in immunized persons. As is shown in Table 15, none of these six cases had completed their full immunization. Table 15 shows the results of cases determined by the Surveillance Committee from 28th June, 1956 to 31st December, 1960.

Poliomyelitis Immunization Injections.—The number of Salk injections given from the start of the programme on the 28th June, 1956 to 31st December, 1960 appears in Table 16.

TABLE 16.—INJECTIONS GIVEN SINCE CAMPAIGN STARTED

28th June—31st December, 1956	223,979
1st January—31st December, 1957.....	401,683
1st January—31st December, 1958.....	226,164
1st January—31st December, 1959.....	306,463
1st January—31st December, 1960.....	156,165
	1,354,454

The breakdown of this total number of injections into first, second and third injections in the respective age groups is shown in Table 17. A smaller percentage of the eligible population over 15 years of age start the course of injections and Table 17 shows that a greater percentage of this age group fail to complete the course once it is started compared with the 0-14 age group. (This is reflected by the difference between the number of third injections and first injections.)

TABLE 17.—SEPARATION OF FIRST, SECOND AND THIRD INJECTIONS

	0-14 years	Over 15 years	Total
First injections	288,647	196,213	484,860
Second injections	281,817	182,535	464,352
Third injections	256,601	148,641	405,242
	827,065	527,389	1,354,454

With the progressively increasing number of persons being immunized, it was obvious that the level of demand for poliomyelitis immunization injections must fall. Ideally, it would be hoped that in time all persons would be immunized to the point where the current demand would settle to a figure approximating the number of new births plus child and adult immigration into South Australia. This level has not yet been reached.

Although there is still a steady demand for the immunization of "pre-school" children, the response from adults for immunization is falling—although there must be large numbers still who are not protected. Table 18 showing injections given each quarter in age groups reflects the following facts; the continuing steady demand from "pre-school" children, the low response from school children and the falling demand from the "over 15 years" age group.

The continuing steady demand in the "pre-school" group could be explained by children applying for immunization as they reach the starting age of six months.

The low numbers in the school age groups may not be due to lack of response—on the contrary, it is more likely to arise from the high immunization rate achieved in both school and pre-school age groups previously. As such a high proportion of these children were immunized earlier, there may be a small number only who would still be eligible. This reasonable level of immunization in the school age group should continue as long as there is a good response obtained in the "pre-school" group (as the children immunized at pre-school age enter the school age group it means less children in the latter group who require immunization).

The falling off in response from adults is thought to be due in part to persisting ideas such as "poliomyelitis is a disease of children" and the fact that most cases recently have been in small children. If future cases occur in adults (as is likely) no doubt there will be a rush for immunization as has occurred before in this State.

Mobile units.—With the decreasing demand for poliomyelitis immunization injections, it is considered no longer necessary to use the four mobile units. Previously the number of applicants attending each unit daily made it impracticable to give injections in halls and the caravans used as mobile surgeries provided efficient, quick and convenient facilities for immunizing large numbers. They have served admirably their original purpose over the past four and a half years of the mass immunization programme. It is thought that the smaller numbers of people attending for injections at country centres will, in future, allow for the injections to be given in halls.

Next year, therefore, three caravans will be regarded as available to the Dental Section of the Department of Public Health. The caravan retained for poliomyelitis immunization work will be located in the metropolitan area. The country immunization work will be done by using the existing prime movers only, each being converted to carry the necessary equipment (including a gas stove for sterilization and a gas refrigerator for vaccine storage). The actual injections will be given in local halls. This will obviate heavy caravans having to be towed to country areas and will permit the staff on each country unit to be reduced from two orderlies to one with resultant financial savings.

TABLE 18.—INJECTIONS GIVEN EACH QUARTER—IN AGE GROUPS

SHOWING CONTINUING DEMAND IN "PRE-SCHOOL" GROUP, LOW RESPONSE IN "SCHOOL AGE" GROUP, AND FALLING OFF IN NUMBERS IN THE "OVER 15 YEARS" GROUP

Quarter Ending	Pre-school Age	School Age	Over 15 Years	Total
30th September, 1956	19,837	74,726	2,442	97,005
31st December, 1956	38,552	86,223	2,199	126,974
31st March, 1957	39,464	54,595	3,106	97,165
30th June, 1957	23,350	85,287	3,308	111,945
30th September, 1957	25,553	56,898	5,423	87,874
31st December, 1957	40,276	55,534	8,889	104,699
31st March, 1958	10,460	12,474	10,544	33,478
30th June, 1958	16,455	19,316	35,893	71,664
30th September, 1958	15,553	3,505	52,095	71,153
31st December, 1958	16,135	3,482	70,252	89,869
31st March, 1959	12,719	2,596	56,384	71,699
30th June, 1959	15,698	3,419	72,975	92,192
30th September, 1959	16,979	2,511	62,643	82,233
31st December, 1959	15,086	1,979	43,274	60,339
31st March, 1960	14,470	1,962	36,735	53,167
30th June, 1960	15,086	1,871	30,980	47,937
30th September, 1960	13,294	1,686	17,923	32,903
31st December, 1960	8,845	1,089	12,224	22,158
	357,812	469,253	527,389	1,354,454

Issue of Salk Vaccine to Local Boards of Health and Private Doctors.—Arrangements are being made for Salk vaccine to be issued in early 1961 to those Local Boards of Health and private medical practitioners who desire it and can provide adequate refrigeration storage and will undertake to supply records of each injection given. Local Boards of Health have been asked to arrange regular, free immunization sessions; future immunity status in the community may be determined largely by the extent of Local Board participation. Where Salk vaccine is used by a private medical practitioner for private patients, no charge will be made for the vaccine but the practitioner may charge the usual private practice fee for the injection. Particularly in country areas these arrangements could provide a readily available way whereby country residents could obtain poliomyelitis immunization (Salk) injections at their convenience. The Department of Public Health poliomyelitis immunization (Salk) units will continue to visit country areas as circumstances require.

Quadruple and other combined vaccines containing a poliomyelitis component.—As they become available in 1961, these immunization agents will be issued through the Department of Public Health to Local Boards of Health and private medical practitioners on the same terms of issue as poliomyelitis vaccine (Salk).

Quadruple Vaccine, containing pertussis-diphtheria-tetanus-poliomyelitis antigens, will be issued for the immunization of children from six months to two years of age.

A combined vaccine of diphtheria-tetanus-poliomyelitis antigens is expected to be available late in 1961 for immunization of children over two years of age.

During 1961, a combined tetanus-poliomyelitis vaccine is expected also. This should be useful for the immunization of older children and especially for the immunization of adults.

In the "out districts" where there are no Local Boards of Health, the Department will try to arrange immunization unit visits to conduct free immunization sessions with these combined antigens in addition to its present routine administration of "Salk" injections given alone. (In other areas the Local Boards of Health are being asked to provide the facilities for immunization with quadruple and other combined antigens.)

The end of the Department's mass immunization campaign.—The year under review is a notable one in that it will mark the end of the mass immunization campaign being conducted solely by the Department of Public Health. Since Poliomyelitis vaccine was first available in June, 1956 almost all of the activities of the Poliomyelitis Division of the Department have been directed toward getting the greatest number of people immunized against poliomyelitis in the shortest time by using a central organization and a central staff. Since then 1,354,454 injections have been given in South Australia. The mobile units have made numerous visits to all parts of the State—as far as Port McDonnell in the South, Farina in the North and Fowlers Bay in the West. Areas even more remote have been immunized by co-operation with other services such as the Flying Doctor Organization. The dramatic fall in the number of cases of poliomyelitis occurring since the campaign began has made it worthwhile and satisfying. After this year, immunization against poliomyelitis will rest progressively more with Local Boards of Health and private medical practitioners. The most necessary need in the future probably will be for local facilities in every area for the immunization with quadruple antigen of every child turning six months of age, together with adequate publicity to ensure that parents use the facilities available.

The future work.—The number of poliomyelitis immunization injections given by the Poliomyelitis Services staff will be progressively less. Side by side with this the work of the branch will involve:—

Trying to arrange adequate local facilities for immunization in each area and encouraging the continuance of regular campaigns.

Controlling and issuing the supplies of any vaccines containing a poliomyelitis component—to safeguard the potency of the vaccine and the preservation of records.

Maintaining the existing important central register by continuing to record each poliomyelitis injection received by any person in South Australia (information for this will be obtained from records returned by Local Boards and private doctors).

Publicity regarding poliomyelitis immunization directed to Local Boards of Health, private medical practitioners and the public.

Following up of reported instances of reactions to the vaccines being used.

Investigation of reported suspected cases of poliomyelitis in both vaccinated and unvaccinated subjects and providing a diagnostic consultant service when requested by private medical practitioners.

Intensifying the after-care work being carried out with post poliomyelitis patients of past epidemics and of other certain selected cases of chronically handicapped people.

Assessing and advising, as at present, on the most suitable day, educational or institutional placement for cerebral palsied or other handicapped children and others referred to the Department by medical practitioners.

Care of the long term physically handicapped.—The type of work being carried out by the Department through its Poliomyelitis Division was described in the Annual Report for the year ended 31st December, 1959. During 1960, this work was continued and the case load increased to the stage where approval was given for the employment of a second physiotherapist. An attempt will be made early in 1961 to recruit a suitable physiotherapist for appointment to this second position.

There are sufficient patients left crippled by past poliomyelitis epidemics (without considering the new cases which are occurring and will occur in non-immunized persons) to keep a medical officer (as well as the Principal Medical Officer), two physiotherapists and a social worker busy for many years. The work with each individual patient is time consuming. Each patient is considered from viewpoint of restoration of function, prevention of deformity and achieving maximum independence in all activities of daily living—the many small everyday tasks which are taken for granted by the able but which may represent a formidable physical effort for the handicapped. Younger patients are assessed and guided in the most suitable educational course in the light of their mental ability and physical disability. Vocational outlets are explored for each patient when necessary. This concentrated programme of care is economical and effective.

The principles are—careful selection of patients, not on the basis of the severity of the handicap alone but on the assessment of the patient's real desire to "come to grips with treatment", and then intensive treatment of the whole patient in the total environment. In this treatment there must be enthusiasm on the part of the therapists to ensure that the patients continue to persevere. The results already being achieved with patients suffering from long term physical handicaps are showing that the work is very worthwhile.

Summary.—During the year ended 31st December, 1960 the Poliomyelitis immunization campaign was continued actively but because there are people who remain non-immunized despite facilities, the number of cases of poliomyelitis occurring during the year was higher than in the two previous years.

This year marks the end of the mass immunization campaign conducted by the Department alone as, in the future, vaccine will be available to Local Boards of Health and private medical practitioners. The Department's work in the care of the long term physically handicapped has been pursued actively during the year.

5. TUBERCULOSIS BRANCH

The number of new notifications of Tuberculosis increased to 288 this year, from a total of 283 in 1959. Pulmonary disease was 85 per cent of the new cases.

The following table shows the local board of health origin of new notifications for 1960.

TABLE 19.—PULMONARY TUBERCULOSIS

METROPOLITAN AREA		COUNTRY AREA—continued	
Local Board of Health—		Local Board of Health—	Notifications
East Torrens County Board	29	Berri	1
Adelaide	16	Clare District	1
Woodville	21	Crystal Brook	1
Enfield	14	Gawler	1
Port Adelaide	19	Jamestown	1
West Torrens	13	Kapunda Town	1
Unley	6	Kapunda District	1
Marion	13	Kingscote	1
Hindmarsh	16	Others (no fixed abode)	2
Thebarton	6	Tarcoola out-district	1
Prospect	14	Millicent	1
Mitcham	7	Minlaton	1
Brighton	8	Mobilong	1
Glenelg	7	Morgan	1
Walkerville	1	Murray Bridge	1
	190	Owen	1
		Port Lincoln	1
		Renmark Town	1
		Stirling	1
		Strathalbyn Town	1
		Strathalbyn District	1
		Waikerie	1
		Wallaroo	1
		Warooka	1
		Yankalilla	1
		Yorke Peninsula	1
		Oodnadatta out-district	1
		Fowlers Bay out-district	1
		Woomera out-district	1
COUNTRY AREA			
Local Board of Health—	Notifications		
Loxton	7		
Port Augusta	6		
Salisbury	6		
Mount Gambier Town	5		
Whyalla	4		
Mount Gambier District	2		
Port Elliot	2		
Tumby Bay	2		
Barmera	1		

NON-PULMONARY TUBERCULOSIS

METROPOLITAN AREA		COUNTRY AREA	
Local Board of Health—	Notifications	Local Board of Health—	Notifications
Port Adelaide	2	Mount Gambier Town	1
Marion	3	Salisbury	1
Enfield	3	Whyalla	1
East Torrens County Board	1	Waikerie	1
Mitcham	2	Pinnaroo	1
Woodville	2	Orroroo	1
Unley	2	Naracoorte	1
Colonel Light Gardens	1	Kapunda Town	1
West Torrens	1	Penola	1
Prospect	1	Port Augusta	3
Adelaide	3		
			12
	21		

Migrants.—There were 36 notifications of tuberculosis in migrants who have been in Australia less than five years. The following table shows the country of origin.

TABLE 20

Country	Notifications
England	6
Poland	2
Italy	5
Yugoslavia	2
Greece	5
Scotland	2
Germany	2
Ukraine	1
Finland	2
Russia	1
Holland	3
Latvia	1
Hungary	1
Austria	1
Cyprus	1
India	1

36

Mortality.—There were 36 deaths from pulmonary tuberculosis and three from tuberculosis of other forms. Deaths attributed to tuberculosis have decreased considerably over the past three years as indicated by the following figures:—

1958	6.66 deaths per 100,000
1959	5.43 deaths per 100,000
1960	4.13 deaths per 100,000

The age and sex distribution of those having dies of tuberculosis is shown in the following table:—

TABLE 21.—PULMONARY TUBERCULOSIS

Age at Death	Male	Female	Total
15-24 years	—	1	1
25-34 years	1	—	1
35-44 years	4	1	5
45-54 years	5	3	8
55-64 years	8	1	9
65-74 years	6	2	8
75 and over	2	2	4
	26	10	36

NON-PULMONARY TUBERCULOSIS

Age at Death	Male	Female	Total
5-9 years	—	1	1
55-59 years	1	—	1
75 and over	—	1	1
	1	2	3

Tuberculosis Allowances.—There was a further and considerable decrease in the numbers receiving tuberculosis allowance. Two hundred and fifteen persons were receiving the benefit at 31st December, 1960 compared with 299 at 31st December, 1959.

X-Ray Surveys.—During 1960 a total of 141,372 persons were examined; 104,217 in the metropolitan area and 37,155 in the country. One hundred and seven new notifications of tuberculosis resulted directly from survey examinations. In 1959 the percentage of new cases found directly from surveys was 29 per cent; it has increased to 38 per cent of the total number of new notifications in 1960. X-ray surveys continue to be a lucrative source of new case yield and to date there has not been any significant change in the new case rate per 1,000 persons examined. The new case yield was 0.67 per 1,000 in 1959 and 0.76 per 1,000 in 1960.

TABLE 22.—NEW CASES FOUND FROM X-RAY SURVEYS IN 1960

Age Group	Male	Female	Total
10-14 years	—	1	1
15-19 years	—	2	2
20-24 years	3	3	6
25-29 years	3	4	7
30-34 years	6	3	9
35-39 years	8	4	12
40-44 years	6	5	11
45-49 years	11	5	16
50-54 years	7	4	11
55-59 years	8	1	9
60-64 years	3	3	6
65-69 years	8	—	8
70-74 years	1	—	1
75 years and over.....	7	1	8
Total	71	36	107

Tuberculin Testing and B.C.G. Vaccination.—The attached table shows the results of tuberculin testing and B.C.G. vaccination in schools and institutions during 1960.

TABLE 23.—MANTOUX TESTING AND B.C.G. VACCINATION, 1960—SOUTH AUSTRALIA

Group	Number Tested	Naturally Positive	Percentage Naturally Positive	Positive from Previous B.C.G. Vaccination	Negative	Vaccinated
Country school children, all grades—						
Australian born	796	32	4·0	19	745	363
Migrants	16	2	12·5	1	13	11
Sub-total	812	34	4·2	20	758	374
Metropolitan 7th Grade school children—						
Australian born	7,384	190	2·5	71	7,123	6,867
Migrants	1,405	146	10·4	56	1,203	1,197
Sub-total	8,789	336	3·8	127	8,326	8,064
Institutions and others	541	59	10·7	8	474	279
Total	10,142	429	4·2	155	9,558	8,717

The average monthly number of occupied beds in our various tuberculosis hospitals remains fairly steady as shown in the following table:—

TABLE 24.—AVERAGE NUMBER OF BEDS OCCUPIED PER MONTH

1956.....	228
1957.....	190
1958.....	156
1959.....	141
1960.....	143

The number fell fairly steadily until 1957 and appears to have been static at around 145 subsequently. It would therefore seem that the anti tuberculosis measures which have been in force hitherto in this State have now reached an optimum, and it is possible that further improvement will not occur without some re-organization.

The advent of effective tuberculosis chemotherapy and thoracic surgery deviated the interest of tuberculosis management on to the treatment of the individual case. This of course does not mean to say that case finding and contact follow up were neglected but our present day attitude is to shift the emphasis and the interest from the machinery established for satisfactory treatment, which is now running smoothly to a greater effort in case finding. For this purpose we are extending the mass miniature radiography programme and modernizing the units. We can then concentrate on State wide surveys in three years instead of seven.

Secondly, the city unit has been brought up to date and with the co-operation of the metropolitan practitioners should become the most important instrument for early case finding that we have.

Thirdly, all school entrants are now being skin tested in the metropolitan area and emphasis is being placed on the personal follow up of the families of all positive reactors, both in Grade I and Grade VII.

Fourthly, the opening of the new Chest Clinic will result in greater public use of this service because of reduced waiting time.

These measure will improve our tuberculosis services, especially for the metropolitan area. Much of the work in the country area must still be done by the local practitioners. We have made their task easier by smoothing the arrangements for Mantoux testing, X-raying and sputum testing and instituting a fixed system of remuneration for all these services.

New methods of tuberculosis control are being discussed, particularly in America. Some of these methods were considered by the National Tuberculosis Advisory Council at its last meeting, particularly the preventive treatment of persons who react strongly to tuberculin.

These developments are being carefully watched in South Australia and new methods will be adopted as their value becomes fully established.

6. SUMMARY AND CONTENTS

One of the primary aims of preventive medicine is to reduce mortality rates, particularly in young people. Both the general death rate and the infant mortality rate reached record low figures in the year under review.

The main causes of infant mortality continue to be congenital malformations and prematurity. Respiratory disease and birth injuries continue to play major parts. All these conditions are the subjects of research in many places. This effort, together with improved teaching and practice in obstetrics, is reflected in the improved results.

In the sphere of communicable diseases the year was notable on the one hand for the absence of any significant reported outbreak of influenza, and on the other hand for noticeable increases in bacillary dysentery and salmonellosis, and in infective hepatitis. Constant efforts to inculcate more hygiene habits in the community, particularly in food handlers and children, are not proving sufficient to bring about reduction in these conditions. Widespread fly-breeding is one of the great problems, and a fully aroused public conscience and a determination by every individual to prevent this menace are essential to reduce the toll of unnecessary illness and waste of young lives from this cause.

Problems of special interest in environmental sanitation continue to arise because of our rapidly expanding population and economy.

Land subdivision brings problems of drainage and waste disposal, and a continual watch has to be kept on allotment sizes in relation to disposal of liquid wastes. Easy availability of water in more and more parts of the State leads to increased usage which often reaches prodigious proportions. One result is the rising of the water table and the production of drainage problems in areas where no problem existed before. The need for conservation of water is stressed not only for obvious economic reasons and because availability is not without limit, but because unnecessary use of water creates sanitary problems to which there is often no simple answer.

The School Health Service continues to discover and refer for treatment many abnormal conditions of special importance to education. The outstanding examples are defects of vision and hearing—defects which, if not dealt with early, are likely to have a permanent stultifying effect on education and on developing personalities.

Dental disorders and allergies account for a large proportion of the conditions reported. Increasing prevalence of hepatitis, and a sharp decrease in rubella both call for comment. Hepatitis calls for increased effort in health education, and the hope that research will soon isolate the virus of this disease so that a rational attack on it can be planned. The decline in rubella is no cause for satisfaction. It is still desirable that all young women develop immunity to this disease—by reason of a clinical attack—before they reach the age of child-bearing.

The dental survey in the Port Lincoln area has shown that the teeth of children who have regularly drunk Uley-Wanilla water are distinctly better than those of children who have regularly drunk tank water. These groups differ in that the Uley-Wanilla supply naturally contains fluoride to the extent of one part per million, whereas tank water contains virtually no fluoride. Other differences between these groups of children which might explain their differences in dental health have been looked for, but not found.

The incidence of poliomyelitis continues at a very low figure, although there was a little increase compared with the previous year. There has still been no case in a person who had received three doses of vaccine.

The State vaccination campaign has continued but its tempo has slackened, and the release of poliomyelitis vaccine to Local Boards and outside practitioners is foreshadowed.

Medical rehabilitation of persons crippled by this disease continues with heartening results.

In the Tuberculosis Services, the continued value of X-ray survey work has been demonstrated. Tuberculin testing programmes show a further fall in the reactor rate of children to the Mantoux test—certainly the best indication that the campaign against tuberculosis is having a real and lasting effect. The extension of this programme to school entrants will provide not only more information, but will also assist in the detection of sources from which the very few affected children have been infected.

The Board wishes to express its thanks to members and officers of Local Boards of Health who continue to play a vital role in the public health services of the State.

Special thanks are also offered to the Board's own officers and the staff of the Department for loyal and efficient service.

We also express to you, Sir, our thanks for your support and interest at all times in the many and varied tasks of the Board and the Department.

P. S. WOODRUFF, Chairman
 J. B. CLELAND
 G. H. McQUEEN
 C. WILLIAMSON
 A. BERTRAM COX } Members

M. E. S. BRAY, Secretary.

Adelaide, 1st August, 1961.

